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EXAMINER
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PHILPOTT, JUSTIN M

ART UNIT	PAPER NUMBER
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2665

DATE MAILED: 07/17/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Application No.

09/753,227

Applicant(s)

ENGWER ET AL.

Examiner

Justin M Philpott

Art Unit

2665

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on 27 June 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 2-24 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 2-24 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 28 December 2000 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

## Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☒ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

## Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413) Paper No(s) \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other:

## **DETAILED ACTION**

### ***Response to Amendment***

1. In the Amendment filed, April 28, 2003, Applicant has canceled claim 1, amended claims 2, 3 and 5 to be in independent form, added a new limitation to claim 2 (lines 3-4), amended claims 4 and 6-8 to provide proper antecedent basis, amended claim 20 to include reference to IEEE 802.11, and added new claim 24. In view of the amendments, the rejection of claim 8 under 35 U.S.C. 112, second paragraph is withdrawn. However, claim 14 remains rejected under 35 U.S.C. 112, second paragraph for the same reasons recited in the previous office action. Furthermore, the drawings remain objected to for the same reasons recited in the previous office action. Additionally, claim 5 is objected to; claims 10 and 15 are rejected under 35 U.S.C. 112, first paragraph; and claims 3, 15 and 20 are rejected under 35 U.S.C. 112, second paragraph in the following action.

### ***Response to Arguments***

2. Applicant's arguments with respect to claims 1-23 (pages 5-6) have been considered but are moot in view of the new ground(s) of rejection.

### ***Drawings***

3. Figures 1, 4 and 5 should be designated by a legend such as --Prior Art-- because only that which is old is illustrated. See MPEP § 608.02(g). A proposed drawing correction or

Art Unit: 2665

corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

4. The drawings are also objected to because in Figure 10, the labels "TIM", "PRELIMINARY FCS 1050", "TEST PATTERN 1060" and "FCS 1070" should not be included in the range identified by the label "1010" in order to remain consistent with the specification. A proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

#### *Claim Objections*

5. Claim 5 is objected to because of the following informalities: "the data frame" (lines 2-3) is referenced prior to the introduction of "a data frame" (line 5). The order of these statements that include data frame should be reversed. Appropriate correction is required.

#### *Claim Rejections - 35 USC § 112*

6. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

7. Claims 10 and 15 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention. Specifically, claims 10 and

Art Unit: 2665

15 include the limitation "access point internet protocol information" whereas the specification and drawings disclose "access point ID information" (e.g., see AP ID information 732 in FIG. 7 and on page 8, lines 19-20, and see AP ID information 1030 in FIG. 10).

8. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

9. Claim 3, 14, 15 and 20 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Specifically, claim 14 recites the limitation "each traffic indication map (TIM) beacon" and "each delivery traffic indication message (DTIM) beacon" in claim 10. There is insufficient antecedent basis for this limitation in the claim. Applicant may overcome this rejection by amending claim 14 to recite "a traffic indication map (TIM) beacon" and "a delivery traffic indication message (DTIM) beacon".

Claims 3, 15 and 20 recite the limitation "in accordance with ... IEEE 802.11" which is indefinite because a specific edition and/or date is not included with the recited protocol. Applicant may overcome the rejection of claims 3, 15 and 20 by amending the claims to include, e.g., "(IEEE Std 802.11, 1999 edition)".

#### ***Claim Rejections - 35 USC § 102***

10. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

Art Unit: 2665

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

11. Claims 2, 5-8, 10, 15 and 16 are rejected under 35 U.S.C. 102(e) as being anticipated by U.S. Patent No. 6,192,230 to van Bokhorst et al.

Regarding claims 2, 5, 10, and 15, van Bokhorst teaches a method comprising: broadcasting a special delivery traffic indication message DTIM beacon (e.g., 94 and 96 of the TIM message in FIG. 5, see col. 3, line 27 – col. 6, line 42; and 402 and 404 of the PTIM message in FIG. 11, see col. 7, line 25 – col. 10, line 20), the special DTIM beacon (e.g., 94/96; 402/404) including a field having a traffic indicator bit that is set to denote a transmission after the DTIM beacon (e.g., broadcast indicator 94; and type portion 404 indicating the message is a PTIM as opposed to a PSYNC); and broadcasting a data frame that includes at least load balancing information (e.g., destination address portions DA indicative of station addresses for which access point has messages stored in its buffer, see FIGS. 4, 5 and 11 and col. 4, lines 40-65). Further, regarding claim 5, van Bokhorst teaches the data frame (e.g., 410 in FIG. 11) is broadcast after a definitive time period has elapsed after the broadcasting of the special DTIM beacon (e.g., 402 and 404).

Regarding claim 6, van Bokhorst teaches an embodiment (e.g., FIG. 5) where the data frame (e.g., first message portion 98/100) is broadcast immediately after the broadcasting of a DTIM (e.g., broadcast indicator/count 94/96).

Regarding claim 7, van Bokhorst teaches the broadcasting of both the DTIM and the data frame is performed by an access point (e.g., access point 16 in FIG. 1).

Regarding claim 8, as discussed above regarding claims 2, 5, 10 and 15, van Bokhorst teaches the load balancing information (e.g., DA) is computed from information pertaining to characteristics of wireless units in communication with the access point by teaching that load balancing information comprises information indicative of wireless units (e.g., station addresses) for which an access point has messages stored in its buffer (e.g., see col. 4, lines 40-65).

Regarding claim 16, van Bokhorst further teaches the beacon comprises a frame check sequence (e.g., checks CRC 80, 106 and 412) associated with the plurality of additional information elements.

### ***Claim Rejections - 35 USC § 103***

12. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

13. Claims 3, 20, 22 and 24 are rejected under 35 U.S.C. 103(a) as being unpatentable over van Bokhorst in view of IEEE Std. 802.11 (IEEE, August 1999).

Regarding claims 3 and 20, while van Bokhorst may not specifically disclose configuring according to the IEEE 802.11 standard, van Bokhorst specifically teaches the method as discussed above regarding claims 2, 5, 10 and 15 is performed by a wireless LAN system, (e.g., see col. 3, lines 13-40). It is well known in the art that the IEEE 802.11 standard is directly applicable to wireless LAN systems and, furthermore, at the time of the invention configuring

Art Unit: 2665

the special beacon of van Bokhorst to be in accordance with IEEE 802.11 would have been obvious to one of ordinary skill in the art because it is well known in the art that it is advantageous to configure a method to be in accordance with an industry standard, such as IEEE 802.11, in order to achieve industry-wide acceptance and compatibility. Thus, at the time of the invention it would have been obvious to one of ordinary skill in the art to adapt the broadcasting method of van Bokhorst to be compatible with an industry standard such as IEEE 802.11 in order to achieve industry-wide acceptance and compatibility.

Regarding claim 22, as discussed above regarding claims 2, 5, 10 and 15, van Bokhorst teaches the load balancing information includes data pertaining to wireless units in communication with the access point and the access point by teaching that load balancing information comprises information indicative of wireless units (e.g., station addresses) for which an access point has messages stored in its buffer (e.g., see col. 4, lines 40-65).

Regarding claim 24, van Bokhorst teaches the data frame (e.g., 410 in FIG. 11) is broadcast after a definitive time period has elapsed after the broadcasting of the special DTIM beacon (e.g., 402 and 404).

14. Claims 4, 9, 11-14, 17-19, 21 and 23 are rejected under 35 U.S.C. 103(a) as being unpatentable over van Bokhorst in view of IEEE Std. 802.11 (IEEE, August 1999), further in view of U.S. Patent No. 5,548,821 to Coveley.

Regarding claims 4, 9, 11, 17, 21 and 23, van Bokhorst in view of IEEE Std. 802.11 teach the method as described above regarding claims 3 and 20, however, may not specifically disclose transmitting a static bit test pattern. Coveley teaches an adaptive system for self-tuning in a



wireless communications environment whereby a static bit test pattern (e.g., test sequence) is transmitted and a receiver determines which operating frequency to select based upon the accuracy of the received test pattern with a known test pattern (e.g., see col. 1, line 62 – col. 2, line 55). The teachings of Coveley provide improved accuracy of transmission and overcomes prior art disadvantages such as receiving center operating frequency drift, and further, the teachings of Coveley permit transmitters to have slightly different carrier frequencies which more suitably accommodates systems with less precise transmission frequencies (e.g., see col. 2, lines 1-8). Thus, at the time of the invention it would have been obvious to one of ordinary skill in the art to apply the teachings of Coveley to the method of van Bokhorst in view of IEEE Std. 802.11 in order to provide improved accuracy of transmission and to accommodate a greater range of transmission frequency variance.

Further, regarding claims 11 and 17, van Bokhorst teaches the beacon comprises a frame check sequence (e.g., checks CRC 80, 106 and 412). While van Bokhorst may not specifically disclose two frame check sequences, it is generally considered to be within the ordinary skill in the art to adjust, vary, select or optimize the numerical parameters or values of any system absent a showing of criticality in a particular recited value. The burden of showing criticality is on Appellant. In re Mason, 87 F.2d 370, 32 USPQ 242 (CCPA 1937); Marconi Wireless Telegraph Co. v. U.S., 320 U.S. 1, 57 USPQ 471 (1943); In re Schneider, 148 F.2d 108, 65 USPQ 129 (CCPA 1945); In re Aller, 220 F.2d 454, 105 USPQ 233 (CCPA 1955); In re Saether, 492 F.2d 849, 181 USPQ 36 (CCPA 1974); In re Antonie, 559 F.2d 618, 195 USPQ 6 (CCPA 1977); In re Boesch, 617 F.2d 272, 205 USPQ 215 (CCPA 1980). Thus, at the time of the invention it would have been obvious to one of ordinary skill in the art to include a second frame check sequence in

Art Unit: 2665

the beacon of van Bokhorst in view of IEEE Std. 802.11 in view of Coveley, since it is generally considered to be within the ordinary skill in the art to adjust, vary, select or optimize the numerical parameters or values of any system absent a showing of criticality in a particular recited value.

Regarding claims 12-14, 18 and 19, the IEEE Std. 802.11 teaches DTIM and TIM beacons (e.g., see page 57).

### *Conclusion*

15. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

U.S. Patent No. 5,483,676 to Mahany et al. discloses a mobile radio data communication system utilizing a test pattern,

U.S. Patent No. 5,987,011 to Toh discloses a routing method for ad-hoc mobile networks, and

U.S. Patent No. 6,067,297 to Beach discloses an embedded access point supporting communication with a mobile unit in a power-saving mode.

16. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Justin M Philpott whose telephone number is 703.305.7357. The examiner can normally be reached on M-F, 9:00am-5:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Huy D Vu can be reached on 703.308.6602. The fax phone numbers for the

Art Unit: 2665

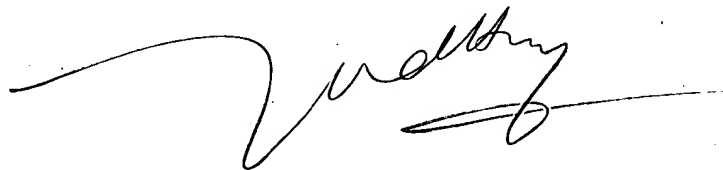
organization where this application or proceeding is assigned are 703.872.9314 for regular communications and 703.872.9314 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703.305.4750.

Justin M Philpott



July 9, 2003



HUY D. VU  
SUPERVISORY PATENT EXAMINER  
TECHNOLOGY CENTER 2600